

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,228	09/28/2001	Horacio E. Franço	SRI/4580-2	7137
:	7590 06/07/2004		EXAM	INER
Moser, Patterson & Sheridan LLP			LAO, TIM P	
Attorneys At, I First Floor	Law		ART UNIT	PAPER NUMBER
595 Shrewsbury Avenue			2655	6
Shrewsbury, NJ 07702			DATE MAILED: 06/07/2004	4

Please find below and/or attached an Office communication concerning this application or proceeding.

•	Application No.	Applicant(s)		
Office Action Commence	09/967,228	FRANCO ET AL.		
Office Action Summary	Examiner	Art Unit		
	Tim Lao	2655		
The MAILING DATE of this communication apperiod for Reply	pears on the cover sheet with the c			
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).				
Status				
1) Responsive to communication(s) filed on 28 S	September 2001.			
	s action is non-final.			
3) Since this application is in condition for allowa	nce except for formal matters, pro	secution as to the merits is		
closed in accordance with the practice under I	Ex parte Quayle, 1935 C.D. 11, 45	i3 O.G. 213.		
Disposition of Claims				
4) Claim(s) <u>1-17</u> is/are pending in the application	L			
4a) Of the above claim(s) is/are withdra				
5) Claim(s) is/are allowed.				
6)⊠ Claim(s) <u>1-17</u> is/are rejected.				
7) Claim(s) is/are objected to.				
8) Claim(s) are subject to restriction and/o	or election requirement.			
Application Papers				
9)☐ The specification is objected to by the Examine	er.			
10) The drawing(s) filed on is/are: a) acc	epted or b) objected to by the E	Examiner.		
Applicant may not request that any objection to the	drawing(s) be held in abeyance. See	37 CFR 1.85(a).		
Replacement drawing sheet(s) including the correc	tion is required if the drawing(s) is obj	ected to. See 37 CFR 1.121(d).		
11) The oath or declaration is objected to by the Ex	xaminer. Note the attached Office	Action or form PTO-152.		
Priority under 35 U.S.C. § 119				
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received.				
2. Certified copies of the priority documents have been received in Application No				
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).				
* See the attached detailed Office action for a list of the certified copies not received.				
Attachment(s)				
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	4) Interview Summary Paper No(s)/Mail Da			
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date		atent Application (PTO-152)		

Art Unit: 2655

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4 and 7-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kuhn et al. (U.S. Patent 6,029,132, hereinafter "Kuhn").

Claim(s)

Kuhn discloses:

1

A method for recognizing an utterance that pertains to a sparse domain, the sparse domain having a linguistic structure (e.g., phonemes) and a plurality of components, objects or concepts (e.g., context-related words), the method comprising the steps of: (col.2, II.19-34)

acquiring a speech signal that represents an utterance; (Fig.1: 14)

performing a first recognition pass by applying a first language model to the speech signal; (Fig.1: 16)

selecting or generating a second language model (e.g., phoneme mixed-tree model: Fig.1: 20) based at least in part on results from the first recognition pass (Fig.1: 18), on information regarding a linguistic structure (e.g., phonemes) of a domain (e.g., context-related words) within the speech signal, and on information regarding relationships among the domain components, objects or concepts within the speech signal; and

Art Unit: 2655

	performing a second recognition pass (Fig.1: 20) by applying the second language
	model (e.g., phoneme mixed-tree model: Fig.1: 20) to at least a portion of the speech signal
	(Fig.1: 14) to recognize the utterance containing the speech signal.
Claim(s)	Kuhn discloses:
	The method of claim 1 wherein the first and second language models are probabilistic finite state grammars. (e.g., probability scores: Fig.1: 18 , 22 ; col.4, II.30-38)
Claim(s)	Kuhn discloses:
	The method of claim 1 wherein the first and second language models are statistical language models. (e.g., N-best: col.4, II.30-38)
Claim(s)	Kuhn discloses:
	The method of claim 1 further comprising the step of selecting or generating acoustic models (e.g., phoneme-mixed tree model: Fig.1: 20) based at least in part on results from the first recognition pass (Fig.1: 18), on information regarding the linguistic structure (e.g., phonemes) of the domain, and on information regarding relationships among the domain components, objects or concepts (e.g., context-related words: col.2, II.19-34).
Claim(s)	Kuhn discloses:
	In a speech recognition system, a method for recognizing an utterance comprising the steps of:
	acquiring a speech signal that represents the utterance; (Fig.1: 14) and
	performing a series of recognition passes (Fig.1: 16, 20), a second and subsequent
	recognition passes (Fig.1: 20) processing at least a portion of the speech signal (Fig.1: 14) using a language model that is constrained by a result of a previous recognition pass.
Claim(s)	Kuhn discloses:
8	

Art Unit: 2655

	The method of claim 7 wherein the second and subsequent recognition passes use
	acoustic models (e.g., phoneme mixed-tree model: Fig.1: 20) that are constrained by a result
	of a previous recognition pass (Fig.1: 18).
Claim(s)	Kuhn discloses:
9	
	A method for generating language models between speech recognition passes, the
	language models based on a domain having a linguistic structure (e.g., phonemes) and a
	plurality of components, objects or concepts (e.g., context-related words), the method
	comprising the steps of: (col.2, II.19-34)
	generating or acquiring a database (Fig.1: 10) containing information regarding the
	linguistic structure of the domain and information regarding relationships among the domain
	components, objects or concepts;
	acquiring a result from a speech recognition pass (Fig.1; 18), the result including a
	domain component, object or concept; and
	generating a language model (e.g., phoneme-mixed tree model: Fig.1: 20) that
	includes a subset of the domain by using the result from the speech recognition pass (Fig.1;
	18) to select information from the database.
Claim(s)	Kuhn discloses:
10	In a speech recognition system, a method for generating language models based on
	a domain having a plurality of components, objects or concepts (e.g., context-related words),
	the method comprising the steps of: (col.2, II.19-34)
	the method comprising the steps of (col.2, ii. 13-54)
	acquiring a result from a speech recognition pass (Fig.1: 18), the result including a
	domain component, object or concept (e.g., context-related words);
	using the result from the speech recognition pass (Fig.1: 18) to perform a search on a
	database (Fig.1: 50) that contains information regarding relationships among the domain

Art Unit: 2655

generating a language model (e.g., phoneme-mixed tree model: Fig.1: 20) using a result from the database search.

3. Claims 5-6 and 11-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Junqua et al. (U.S. Patent 6,314,165, hereinafter "Junqua").

Claim(s)

Kuhn discloses:

5

A method for recognizing an utterance pertaining to an address or location, each address or location having a plurality of components, the method comprising the steps of: (col.2, II.31-54)

acquiring a speech signal that represents an utterance; (Fig.3: 76)

performing a first recognition pass by applying a first language model to the speech signal; (Fig.3: **78**)

selecting or generating a second language model (e.g., phoneme mixed-tree model: Fig.3: **82**) based at least in part on results from the first recognition pass (Fig.3: **80**) and on information regarding relationships among the address or location components; and

performing a second recognition pass (Fig.3: **82**) by applying the second language model (e.g., phoneme mixed-tree model: Fig.3: **82**) to at least a portion of the speech signal (Fig.3: **76**) to recognize the utterance contained in the speech signal.

Claim(s)

Kuhn discloses:

6

The method of claim 5 further comprising the step of selecting or generating acoustic models (e.g., phoneme mixed-tree model: Fig.3: 82), the selection or generation based at least in part on results from the first recognition pass (Fig.3: 80) and on information regarding relationships among the address or location components. (col.2, II.31-54)

Art Unit: 2655

Claim(s)	Kuhn discloses:
11	
	A method for recognizing an address or location expressed as a single utterance, the
	method comprising the steps of: (col.2, II.31-54)
	acquiring a speech signal that represents the single utterance; (Fig.3: 76) and
	performing a series of recognition passes (Fig.3: 78, 82), a second and subsequent
	recognition passes (Fig.3: 82) processing at least a portion of the speech signal (Fig.3: 76)
	using a language model (e.g., phoneme mixed-tree model: Fig.3: 82) that is constrained by a
	result of a previous recognition pass (Fig.3: 80).
Claim(s)	Kuhn discloses:
12	
	The method of claim 11 wherein each address or location has a plurality of
	components (e.g., city, zip). (col.2, II.31-54)
	{An address inherently has city and zip components.}
Claim(s)	Kuhn discloses:
13	
	The method of claim 12 wherein the first recognition pass (Fig.3: 78) processes the
	speech signal (Fig.3: 76) using a first language model (e.g., pronunciation model: Fig.3: 78).
Claim(s)	Kuhn discloses:
14	
	The method of claim 13 wherein the first language model may be used to recognize
	only a subset of the address or location components (e.g., city and zip).
Cloim(a)	Kuba diadagaa
Claim(s) 15	Kuhn discloses:
10	The method of claim 14 wherein the language models used in the assert and
	The method of claim 14 wherein the language models used in the second and
	subsequent recognition passes (Fig.3: 82) may be used to recognize only a subset of the address or location components (e.g., city and zip).
	address of location components (e.g., city and zip).
Claim(s)	Kuhn discloses:

Page 7

Application/Control Number: 09/967,228

Art Unit: 2655

The method of claim 15 wherein the second and subsequent language models (e.g.,
phoneme mixed-tree model: Fig.3: 82) are selected or generated by using the result from a
previous recognition pass (Fig.3: 80) to perform a search on a database (e.g., hotel guest
database: Fig.1: 20) that contains information regarding relationships among the address or
location components (e.g., city and zip).
Kuhn discloses:
The method of claim 11 wherein the second and subsequent recognition passes uses
acoustic models (e.g., phoneme mixed-tree model: Fig.3: 82) that are constrained by a result
of a previous recognition pass (Fig.3: 80).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Documents:

[1] 6,631,346	10/2003	Karaorman et al.
[2] 6,526,380	02/2003	Thelen et al.
[3] 5,177,685	01/1993	Davis et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Lao whose telephone number is 703-305-8955.

The examiner can normally be reached on M-F, 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Page 8

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tim Lao Examiner Art Unit 2655

TL 05/24/04

> DORIS H. TO SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2600